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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,190	12/28/2001	Sanchaita Datta	3003.2.10B	7737

23484 7590 05/21/2004

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EXAMINER

TRAN, PHILIP B

ART UNIT	PAPER NUMBER
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2155

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DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,190

Applicant(s)

DATTA ET AL

Examiner

Philip B Tran

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Response to Amendment

1. This office action is in response to the amendment filed on 2/23/2004. Pending claims 1-17 are presented for further examination.

Third Party Submission Notification

2. A third-party submission has been filed under 37 CFR 1.99 on 04/05/2004 in the published application.

To ensure that a third-party submission does not amount to a protest or pre-grant opposition, 37 CFR 1.99 does not permit the third party to have the right to insist that the examiner consider any of the patents or publications submitted. Furthermore, if the submission or part of the submission is not in compliance with 37 CFR 1.99, that noncompliant submission or part thereof will not be entered in the application file. Therefore, unless the examiner clearly cites a patent or publication on form PTO-892, Notice of References Cited and such reference is used in a rejection or its relevance is actually discussed during prosecution, consideration by the examiner of any patent or publication submitted in a third-party submission cannot be presumed.

If the applicant wants to ensure that the information in a third-party submission is considered by the examiner, the applicant should submit the information in an IDS in compliance with 37 CFR 1.97 and 37 CFR 1.98. An individual who has a duty to disclose under 37 CFR 1.56 should also submit any material information contained in a third-party submission to the Office in an IDS in compliance with 37 CFR 1.97 and 37 CFR 1.98 to ensure such material information is properly disclosed to the examiner.

Claim Rejections - 35 U.S.C. § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 6-9 and 11-16 are rejected under 35 U.S.C. § 102(e) as being anticipated by Xu, U.S. Patent Application Publication No. US 2002/0038339.

Regarding claim 1, Xu teaches a connection-sensitive domain name resolution device, comprising :

a data component identifying IP addresses for at least two paths to a server which has a domain name (i.e., identifying IP addresses for at least two paths to each server 1775-1777) [see Fig. 17I] ; and

a code component which receives a domain name resolution request specifying the domain name, selects an IP address from the data component based on information about the status of a path to the server, and supplies the selected IP address in response to the domain name resolution request (i.e., selecting an IP address based on information about the status of a path to the server by implementation of load balancer for fail-over management and routing packets to the servers) [see Fig. 17I and Paragraphs 0194-0195 on Page 15].

Regarding claim 2, Xu further teaches the connection-sensitive domain name resolution device of claim 1, wherein IP addresses in the data component identify routers on paths to the server (i.e., IP addresses paths to the server 1775-1777), and the code component avoids selecting the IP address of a router that is on a path to the server but is not available (i.e., a fail-over management device 1797 recognizes when packeting engine 1707 fails and is able to send packets to packeting engine 1708 instead) [see Paragraph 0195 on Page 15].

Regarding claim 3, Xu further teaches the connection-sensitive domain name resolution device of claim 1, wherein IP addresses in the data component identify routers on paths to the server (i.e., IP addresses paths to the server 1775-1777), and the code component selects the IP address in a round-robin manner by selecting the next IP address in a list of IP addresses of routers that are on paths to the server and are available when the selection is made (i.e., round-robin approach can be used by DNS to resolve IP addresses and in combination with a fail-over management device 1797 to select IP address and load balance requests across the packeting engines) [see Paragraphs 0189-0191 and Paragraph 0195 on Page 15].

Regarding claim 4, Xu further teaches the connection-sensitive domain name resolution device of claim 1, wherein the code component selects the IP address of an under-loaded path, thereby tending to balance the loads on the paths to the server (i.e., a fail-over management device 1797 recognizes when packeting engine 1707 fails and is able to send packets instead to packeting engine 1708 which indicates that balancing

the loads on the paths to the server is carried out) [see Fig. 17I and Paragraph 0191 and Paragraph 0195 on Page 15].

Regarding claim 6, Xu further teaches the connection-sensitive domain name resolution device of claim 1, in combination with a router for the server, the router having multiple connections to the Internet (i.e., the Internet is shown in Fig. 23 or even inherently implemented though not shown in some figures) [see Fig. 23].

Regarding claim 7, Xu further the connection-sensitive domain name resolution device of claim 1, in combination with a server-sensitive domain name resolver, wherein the combination performs load-balancing over server paths and also performs load-balancing over multiple servers [see Fig. 17I and Paragraphs 0193-0196].

Claim 8 is rejected under the same rationale set forth above to claim 1.

Claim 9 is rejected under the same rationale set forth above to claim 2.

Regarding claim 11, Xu further teaches the method of claim 8, further comprising the step of pinging a router on a path to the server to determine if the router is a reliable connection component (i.e., polling connection statistics) [see Paragraphs 0216-0218 on Pages 16-17].

Claim 12 is rejected under the same rationale set forth above to claim 4.

Claim 13 is rejected under the same rationale set forth above to claim 1.

Claim 14 is rejected under the same rationale set forth above to claim 11.

Claim 15 is rejected under the same rationale set forth above to claim 3.

Claim 16 is rejected under the same rationale set forth above to claim 4.

Claim Rejections - 35 U.S.C. § 103

5. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Xu, U.S. Patent Application Publication No. US 2002/0038339.

Regarding claim 5, Xu does not explicitly teach the connection-sensitive domain name resolution device of claim 1, wherein the device is placed between the server and a router for the server. However, this is a matter of engineering choice to implement the placement of DNS in the network in such an arrangement that DNS is located between

the server and router. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to alter the arrangement and locate the DNS elsewhere in the network while the DNS in combination with the fail-over management device still performing selection of IP address and load balance requests across the packeting engines to the servers [see Paragraphs 0189-0191 and Paragraph 0195 on Page 15].

7. Claims 10 and 17 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Xu, U.S. Patent Application Publication No. US 2002/0038339 in view of Mogul, U.S. Pat. No. 6,262,987.

Regarding claim 10, Xu does not explicitly teach the method of claim 8, further comprising the step of adjusting the time-to-live to be associated with a DNS record for an IP address in a path to the server. However, updating time-to-live (TTL) associated with the DNS record is well-known in the art as disclosed by Mogul [see Abstract and Col. 1, Line 35 – Col. 2, Line 10 and Col. 4, Lines 19-32 and Col. 6, Lines 10-50]. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to set a DNS record time-to-live (TTL) because it would have enabled the prevention of DNS cache miss due to TTL expiration which may result in a time-consuming reload [see Col. 1, Line 35 – Col. 2, Line 10].

Claim 17 is rejected under the same rationale set forth above to claim 10.

Response to Arguments

8. Applicants' arguments have been fully considered but they are not persuasive because of the following reasons:

In response to applicant's request for a copy of the Xu provisional application, a copy of the Xu provisional application (60/231,230) is hereby provided. Though labels on the drawings in the Xu provisional application are different, the teachings still remain the same. For example, routing data packets through multiple paths with IP addresses and implementation of load balancing scheme with inbound load balancing and outbound load balancing [see Xu provisional application, Pages 6-14]

*In response to applicant's arguments that cited reference teaches away from the invention of the instant application, the law of anticipation requires that a distinction be made between the invention described or taught and the invention claimed. It does not require that the reference "teach" what the subject patent teaches. Assuming that a reference is properly "prior art," it is only necessary that the claims under consideration "read on" something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or "fully met" by it. **Colman v. Kimberly-Clark Corp., 218 USPO 789.***

Xu teaches a connection-sensitive domain name resolution device comprising a data component identifying IP addresses for at least two paths to a server which has a domain name. For example, Xu teaches identifying IP addresses for at least two paths to each server 1775-1777) [see Fig. 17I]. In addition, Xu further teaches a code component which receives a domain name resolution request specifying the domain name, selects an IP address from the data component based on information about the

status of a path to the server, and supplies the selected IP address in response to the domain name resolution request. For example, Xu teaches selecting an IP address based on information about the status of a path to the server by implementation of load balancer for fail-over management and routing packets to the servers) [see Fig. 17I and Paragraphs 0194-0195 on Page 15].

Therefore, the examiner asserts that Xu teaches or suggests the subject matter broadly recited in independent claims. Claims 2-7, 9-12 and 14-17 are also rejected at least by virtue of their dependency on independent claims. Accordingly, claims 1-17 are respectfully rejected as set forth above.

Other References Cited

9. The following references cited by the examiner but not relied upon are considered pertinent to applicant's disclosure.

A) Brendel, U.S. Pat. No. 6,182,139 discloses resource-based load balancing on a distributed resource multi-node network.

B) Bhaskaran, U.S. Pat. No. 6,266,335 discloses a network flow switch for connecting a pool of IP routers to a cluster of IP servers sharing a single IP address.

Conclusion

10. Applicant's amendments necessitate the new ground of rejections. Accordingly, **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CAR 1.136(a).

A SHORTENED STATUTORY PERIOD FOR REPLY TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE MAILING DATE OF THIS ACTION. IN THE EVENT A FIRST REPLY IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 CAR 1.136(A) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT, HOWEVER, WILL THE STATUTORY PERIOD FOR REPLY EXPIRE LATER THAN SIX MONTHS FROM THE MAILING DATE OF THIS FINAL ACTION.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Tran whose telephone number is (703) 308-8767. The Group fax phone number is (703) 872-9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam, can be reached on (703) 308-6662.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

PBT
Philip Tran
Art Unit 2155
May 11, 2004

Hosain Alam
HOSAIN ALAM
ADVISORY PATENT EXAMINER